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Remarks**About the Amendments**

The Amendment to Claim 12 eliminates the multiple dependent claim format.

The amendment to Claim 13 is to provide proper antecedent basis for "the interlayer" of Claim 13. The amendment does not narrow the scope of the claims in any manner, but clarifies that the layer of Claim 12 is the interlayer of Claim 13.

Traversal

The Examiner provisionally rejects Claims 1 and 14 under the doctrine of obviousness type double patenting. The Applicants take note of said rejection, but will defer traversal until such time as said provisional rejections become effective.

The Examiner rejects Claims 13-19 under 35 USC §112 as being indefinite. The Examiner points out that there is no antecedent basis for "the interlayer" in Claim 13.

The amendment to Claim 13 should address the Examiner's rejection by providing proper antecedent basis.

The Examiner rejects Claims 1 under 35 USC 102(b) as being anticipated by Degeilh (U.S. Patent No. 5,187,217). The Examiner states that '217 discloses a process for producing a composition as claimed by the Applicants.

The Applicants respectfully disagree. Degeilh ('217) describes a process which utilizes a surfactant such as DOSS in a reaction mixture used to manufacture a PVB composition. It does not state that the final PVB composition includes the surfactant. In fact, one of ordinary skill in the art of PVB manufacture would conclude that the final PVB composition does not include the surfactant, since the process includes three separation and purification steps designed to recover PVB in a purified form from the reaction mixture. The process includes steps of (1) neutralizing the reaction mixture to pH 7, which would ensure that water soluble species are dissolved, collecting the resultant precipitated PVB, and washing said PVB. The separation/purification steps would be expected to completely separate the water-insoluble PVB from the water-

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soluble components, including the surfactant. The Applicants' invention provides that the bleaching compound (or a surfactant that can function as a bleaching compound) is present in the isolated PVB composition, in fact it is added after the PVB has been isolated. There is no teaching or suggestion in the cited references that the surfactant or a bleaching compound is present in the final PVB composition, as claimed by the Applicants.

The Applicants note that the bleaching compound is only optional if the surfactant is not also a bleaching compound (see page 8 of the specification, lines 29-32). DOSS can provide both functions in the Applicants' process, but the Applicants do not remove DOSS completely from the PVB, as the prior art would suggest. Therefore, the Applicants' composition either includes a bleaching compound per se, or a compound that performs the function of a bleaching compound along with another function. The Applicants contend that the presently claimed composition is not anticipated because it does include a component that can perform a bleaching function.

The Examiner contends that Claims 2-3 and 12 are unpatentable under 35 USC §103(a) as obvious over Degeilh '217 in view of Garret. The Applicants respectfully disagree. Degeilh does not provide the PVB composition claimed as the present invention, as discussed hereinabove. The present invention is a PVB composition comprising a surfactant or a bleaching compound. This is not described, suggested or taught in Degeilh. Garret does not cure the deficiency of Degeilh. Garret merely names particular plasticizers that can be useful in the practice of the present invention, as well, but does not make the Applicants use of the bleaching compound obvious.

The Examiner contends that Claims 4-6 are unpatentable under 35 USC §103(a) as obvious over Degeilh '217 in view of Garret further in view of Gutweiler (US '842).

The Applicants' invention is to a PVB composition that has a reduced yellowness by virtue of the inclusion of a bleaching compound, which reduces the yellowness by chemically reacting with color-forming bodies to reduce the concentration of such

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bodies. The Applicants note that the utility of the PVB in '217 is to provide adhesive backing to rear-view mirrors, for example. The yellowness of the PVB would not be important in this application. One looking to improve the optical properties of PVB would not look to Degeilh '217, since it is obvious that the Degeilh is not concerned with the optical properties of the PVB. Therefore, there is no motivation to combine Degeilh '217 with Gutweiler, which is concerned with providing a PVB composition having improved optical properties.

While it is true that the Applicants' invention and Gutweiler are each concerned with the optical properties of PVB, the two inventions are not the same. The Applicants' invention comprises a bleaching compound, or a compound that functions as a bleaching compound. Without being held to theory, the Applicants believe that yellow color can develop in PVB as a result of degradation and/or oxidation products (color-forming bodies) that can become more concentrated in PVB during or after extrusion. It is the Applicants' belief that use of a bleaching compound as described in the present invention can reduce the concentration of the color-forming bodies in the PVB and thereby result in a low color product. It is a key feature of the Applicants' invention that the PVB composition include either (a) a surfactant that can act as a bleaching compound, or break down during normal processing to provide a bleaching compound and/or (b) a surfactant that is not a bleaching compound and a bleaching compound that is separate and distinct from the surfactant. The bleaching compound is optional in the present invention only if the surfactant can act as described in (a), above.

Gutweiler teaches the use of an optical brightener. The Applicants respectfully note that the Examiner has mischaracterized the optical brightener and the surfactant/bleaching compound of the present invention as identical in function. The Examiner will note that at Column 2, lines 50 - 65, Gutweiler describes how an optical brightener works to reduce the perception of yellow in a PVB sheet. The brightener does not actually reduce the concentration of color-

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forming bodies that cause the yellow color, it only reduces the observer's ability to perceive yellow. This is done by flooding the observer's eye with bright blue light which overwhelms the yellow. Therefore, the optical brightener of the cited reference is not the same as a bleaching compound, or perform the function of a bleaching compound (that is, to reduce the concentration of color bodies). Gutweiler, therefore, does not support the argument that the Applicants' invention is obvious.

The Examiner rejects Claims 7-11 under 35 USC §103(a) as unpatentable over Degeilh '217, Garrett, Gutweiler, and further in view of Shohi (EP 1036775 A1) and online Product Catalog from Great Lakes Chemical Corp. The Examiner notes that Shohi and the product catalog disclose antioxidants, and Shohi teaches their use in interlayer films.

The Applicants rely on the arguments hereinabove as rebuttal for obviousness in view of the previously cited art, notwithstanding the additional cited references. The Applicants' invention resides in the components having bleaching capacity, and not in the optional antioxidants. The presence of the antioxidants is not critical to the presently claimed invention, but can be preferred in some instances. However, it is the presence of a component capable of bleaching the composition that sets the present invention apart from the cited references.

The Examiner rejects Claims 1 and 12-20 under 35 USC §103(a) as obvious over Gutweiler in view of Shohi. The Examiner contends that US '842 teaches an optical brightener in an amount effective to improve the optical properties and reduce yellowing, and Shohi teaches the use of a surfactant.

Once again, the Applicants respectfully disagree with the Examiner's conclusion for the same reasons stated hereinabove. The Applicants' bleaching compound (or surfactant that functions as bleaching compound) is quite distinct from the optical brighteners described in Gutweiler. The Examiner's statement, that the optical brightener is present in an amount effective to improve the optical properties and "reduce the

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yellowing of the film" is an inappropriate mischaracterization of the role of the optical brightener as described by Gutweiler. Gutweiler does not say that the optical brighteners will reduce the yellowing of a film, only that the brighteners will reduce the perception of yellow by the observer. "Bleaching" as opposed to "brightening" are two distinct functions, and one of ordinary skill in the art would know this. Therefore, the difference between the present invention and Gutweiler is more fundamental than the absence of the teaching of the use of a surfactant in the reference. Shohi does not cure the deficiency of Gutweiler, and the Applicants contend that the present invention is not obvious in view of the combination of references.

The Examiner rejects Claim 21 as obvious under 35 USC §103(a) over Gutweiler in view of Dauvergne (FR Patent 2,401,941), further in view of Shohi (EP'775).

The Applicants respectfully disagree. The Applicants' process comprises the step of mixing a bleaching compound or a surfactant with the already isolated and washed PVB resin. None of the cited references teaches or suggests such a step. The additives described by the references are added into the PVA/butyraldehyde reaction mixture, from which the PVB resin is obtained. In the Applicants claimed process, the isolated PVB resin is plasticized and in addition it is blended with a bleaching compound or a surfactant-bleaching compound. The presently claimed invention is therefore not obvious in view of the cited references.

In view of the arguments presented hereinabove, the Applicants respectfully contend that the Examiner has failed to make the prima facie case of anticipation and/or obviousness in view of the cited references. In no case does the Examiner provide the Applicants claimed invention from the cited art.

The Examiner uses an inherency argument to conclude that the composition of the prior art inherently anticipates the glass transition temperature (T_g) of the presently claimed invention. A property or characteristic can reasonably be considered to be inherent if considering identical

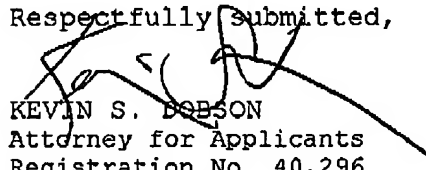
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compositions. However, the Examiner has not been shown that any one of the references identically discloses the Applicants' claimed invention. The Examiner is using a combination of references -- not a single anticipatory reference -- to support an obviousness argument. It does not necessarily follow that the composition of the present invention is obtained by following the combined teachings of the cited references. In fact, the contrary can readily be shown. First, US '842 requires 17 to 29 wt% vinyl alcohol monomer, and there is no such requirement for vinyl alcohol monomer in the presently claimed invention. Second, US '842 requires the presence of an optical brightener, and the present invention does not require said brightener. Third, EP '775 includes a neutralization step with HCl, which would necessarily produce a chloride salt which apparently remains within the final product. This neutralization step is not required and not described in the Applicants' process, and thus the salt is not a necessary by-product of the Applicants' process. Each of these differences is readily discernable from the cited art without further experimentation, and only one of these differences is sufficient to disprove the inherency argument. Therefore the Applicants contend that the Applicants have met the burden of showing that the T_g property is not inherent in the teachings of the cited art.

The Applicants respectfully request that the Examiner reconsider the rejection of the Claims based on the reasons cited above. Instead, the Applicants respectfully petition the Examiner to instead issue a Notice of Allowability for the pending Claims 1-21 in the present application.

Respectfully submitted,



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Dated: February 6, 2006